

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Ricardo Azpiroz et al.                      Art Unit : Unknown  
Serial No. :    Examiner : Unknown  
Filed : March 16, 2004  
Title : DWF4 POLYNUCLEOTIDES, POLYPEPTIDES AND USES THEREOF

**Mail Stop Patent Application**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicant submits the references listed on the attached form PTO-1449.

Under 35 USC §120, this application relies on the earlier filing date of application serial number 09/502,426, filed on February 11, 2000. The references were submitted to and/or cited by the Office in the prior application and, therefore, are not provided in this application.

This statement is being filed with the application. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 3/18/04

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Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. <b>11696-070002</b>	Application No.
		Applicant <b>Ricardo Azpiroz et al.</b>	
	Filing Date <b>March 16, 2004</b>	Group Art Unit	

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,859,326	01/12/99	An			

Foreign Patent Documents or Published Foreign Patent Applications							
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes No
	AB						

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AC	Akama et al., "Efficient Transformation of Arabidopsis Thaliana: Comparison of the Efficiencies With Various Organs, Plant Ecotypes and Agrobacterium Strains," <u>Plant Cell Rep.</u> , 1997, 12:7-11
	AD	Azpiroz et al., "An Arabidopsis Brassinosteroid-Dependent Mutant is Blocked in Cell Elongation," <u>Plant Cell</u> , 1998, 10:219-230
	AE	Barendse et al., "The role of Endogenous Gibberellins During Fruit and Seed Development: Studies on Gibberellin-Deficient Genotypes of <i>Arabidopsis thaliana</i> ," <u>Physiol. Plant</u> , 1986, 67:315-319
	AF	Bishop et al., "The Tomato Dwarf Gene Isolated by Heterologous Transposon Tagging Encodes the First Member of a New Cytochrome P450 Family," <u>Plant Cell</u> , 1996, 8:959-969
	AG	Branch, "A good antisense molecule is hard to find," <u>TIB</u> , 23:45-50
	AH	Choe et al., "The Arabidopsis dwarf1 Mutant is Defective in the Conversion of 24-Methylenecholesterol to Campesterol in Brassinosteroid Biosynthesis," <u>Plant Physiol.</u> , 1999, 119:897-907
	AI	Choe et al., "Overexpression of DWARF4 in the brassinosteroid biosynthetic pathway results in increased vegetative growth and seed yield in Arabidopsis," <u>The Plant Journal</u> , 2001, 26(6):573-582
	AJ	Choe et al., "The DWARF4 Gene of Arabidopsis Encodes a Cytochrome P450 That Mediates Multiple 22 $\alpha$ -Hydroxylation Steps in Brassinosteroid Biosynthesis," <u>The Plant Cell</u> , 1998, 10(2):231-244
	AK	Choi et al., "An Alternative Brassinolide Biosynthetic Pathway Via Late C-6 Oxidation," <u>Phytochemistry</u> , 1997, 44(4):609-613
	AL	Chory et al., "A Role for Cytokinins in De-Etiolation in Arabidopsis," <u>Plant Physiol.</u> , 1994, 104:339-347
	AM	Chory et al., "Arabidopsis thaliana Mutant That Develops as a Light-Grown Plant in the Absence of Light," <u>Cell</u> , 1989, 58:991-999
	AN	Clouse et al., "A Brassinosteroid-Insensitive Mutant in Arabidopsis thaliana Exhibits Multiple Defects in Growth and Development," <u>Plant Physiol.</u> , 1996, 111:671-678
	AO	Deng, "Fresh View of Light Signal Transduction in Plants," <u>Cell</u> , 1994, 76:423-426
	AP	Deng and Quail, "Genetic and Phenotype Characterization of cop 1 Mutants of Arabidopsis thaliana," <u>The Plant Journal</u> , 1992, 2(1):83-95
	AQ	Feldmann, "Cytochrome P450s as genes for crop improvement," <u>Current Opinion in Plant Biology</u> , 2001, 4:162-167

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EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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Other Documents (include Author, Title, Date, and Place of Publication)		
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	AR	Feldmann et al., "A Dwarf Mutant of <i>Arabidopsis</i> Generated by T-DNA Insertion Mutagenesis," <i>Science</i> , 1989, 243:1351-1354
	AS	Fujioka et al., "The <i>Arabidopsis deetiolated2</i> Mutant is Blocked Early in Brassinosteroid Biosynthesis," <i>Plant Cell</i> , 1997, 9:1951-1962
	AT	Fujioka et al., "Identification of Castasterone, 6-Deoxocastasterone, Typhasterol and 6-Deoxotyphasterol from the Shoots of <i>Arabidopsis thaliana</i> ," <i>Plant Cell Physiol.</i> , 1996, 37(8):1201-1203
	AU	Fujioka and Sakurai, "Brassinosteroids," <i>Nat. Prod. Rep.</i> , 1997a, 14:1-10
	AV	Fujioka and Sakurai, "Biosynthesis and Metabolism of Brassinosteroids," <i>Physiologia Plantarum</i> , 1997b, 100:710-715
	AW	Gachotte et al., "An <i>Arabidopsis</i> mutant deficient in sterol biosynthesis: heterologous complementation by <i>ERG 3</i> encoding a $\Delta^7$ -sterol-C-5-desaturase from yeast," <i>The Plant Journal</i> , 1995, 8(3):407-416
	AX	Grove et al., "Brassinolide, a Plant Growth-Promoting Steroid Isolated From <i>Brassica napus</i> Pollen," <i>Nature</i> , 1979, 281:216-217
	AY	Hou et al., "A New Class of <i>Arabidopsis</i> Constitutive Photomorphogenic Genes Involved in Regulating Cotyledon Development," <i>Plant Cell</i> , 1993, 5:329-339
	AZ	Kauschmann et al., "Genetic Evidence for an Essential Role of Brassinosteroids in Plant Development," <i>Plant Journal</i> , 1996, 9:701-713
	AAA	Kim et al., "A 20 nucleotide upstream element is essential for the nopaline synthase (nos) promoter activity," <i>Plant Molecular Biology</i> , 24:105-117
	ABB	Koornneef et al., "A Gibberellin Insensitive Mutant of <i>Arabidopsis thaliana</i> ," <i>Physiol. Plant</i> , 1985, 65:33-39
	ACC	Koornneef and Van der Veen, "Induction and Analysis of Gibberellin Sensitive Mutants in <i>Arabidopsis thaliana</i> (L.) Heynh," <i>Theor. Appl. Genet.</i> , 1980, 58:257-263
	ADD	Li et al., "A Role for Brassinosteroids in Light-Dependent Development of <i>Arabidopsis</i> ," <i>Science</i> , 1996, 272:398-401
	AEE	Li et al., "Conservation Function Between Mammalian and Plant Steroid 5 $\alpha$ -Reductases," <i>Proc. Natl. Acad. Sci. USA</i> , 1997, 94:3554-3559
	AFF	Li and Chory, "A Putative Leucine-Rich Repeat Receptor Kinase Involved in Brassinosteroid Signal Transduction," <i>Cell</i> , 1997, 90:929-938
	AGG	Mandava, "Plant Growth-Promoting Brassinosteroids," <i>Annu. Rev. Plant Physiol. Plant Mol. Biol.</i> , 1988, 39:23-52
	AHH	Mitchell et al., "Brassinins-a New Family of Plant Hormones from Rape Pollen," <i>Nature</i> , 1970, 225:1065-1066
	AII	Mushegian and Koonin, "A Putative FAD-Binding Domain in a Distinct Group of Oxidases Including a Protein Involved in Plant Development," <i>Protein Science</i> , 1995, 4:1243-1244
	AJJ	Nebert et al., "P450 Gene Nomenclature Based on Evolution," <i>Methods Enzymol.</i> , 1991, 206:3-11
	AKK	Nebert et al., "The P450 Superfamily: Update on New Sequences, Gene Mapping, and Recommended Nomenclature," <i>DNA and Cell Biology</i> , 1991, 10(1):1-14
	ALL	Nebert et al., "CORRIGENDUM The P450 Superfamily: Update on New Sequences, Gene Mapping, and Recommended Nomenclature," <i>DNA and Cell Biology</i> , 1991, 10(5):397-398

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	AMM	Nelson et al., "P450 superfamily: update on new sequences, gene mapping, accession numbers and nomenclature," <u>Pharmacogenetics</u> , 1996, 6:1-42
	ANN	Noguchi et al., "Biosynthetic Pathways of Brassinolide in Arabidopsis," <u>Plant Physiology</u> , 2000, 124:201-209
	AOO	Nomura et al., "Blockage of Brassinosteroid Biosynthesis and Sensitivity Causes Dwarfism in Garden Pea," <u>Plant Physiol.</u> , 1997, 113:31-37
	APP	Rees, "Biosynthesis of Ecdysone," <u>Comprehensive Insect Physiology, Biochemistry and Pharmacology</u> , 1985, Kerkut and Gilbert (eds.), Oxford, Pergamon Press, pp. 249-293
	AQQ	Sakurai and Fujioka, "Studies on Biosynthesis of Brassinosteroids," <u>Biosci. Biotechnol. Biochem.</u> , 1997, 61:757-762
	ARR	Stam et al., "The Silence of Genes in Transgenic Plants," <u>Annals of Botany</u> , 79:3-12
	ASS	Szekeress et al., "Brassinosteroids Rescue the Deficiency of CYP90, a Cytochrome P450, Controlling Cell Elongation and De-etiolation in Arabidopsis," <u>Cell</u> , 1996, 85:171-182
	ATT	Takahashi et al., "The DIMINUTO Gene of <i>Arabidopsis</i> is Involved in Regulating Cell Elongation," <u>Genes &amp; Development</u> , 1995, 9:97-107
	AUU	Talon et al., "Endogenous Gibberellins in <i>Arabidopsis thaliana</i> and Possible Steps Blocked in the Biosynthetic Pathways of the Semidwarf <i>ga4</i> and <i>ga5</i> Mutants," <u>Proc. Natl. Acad. Sci. USA</u> , 1990, 87:7983-7987
	AVV	Timpte et al., "Effects of the <i>axr2</i> Mutation of <i>Arabidopsis</i> on Cell Shape in Hypocotyl and Inflorescence," <u>Planta</u> , 1992, 188:271-278
	AWW	Timpte et al., "The <i>axr2-1</i> Mutation of <i>Arabidopsis thaliana</i> is a Gain-of-Function Mutation that Disrupts an Early Step in Auxin Response," <u>Genetics</u> , 1994, 138:1239-1249
	AXX	van der Krol et al., "Antisense genes in plants: an overview," <u>Gene</u> , 1988, 72:45-50
	AYY	Waycott et al., "Phenotypic Characterization of the <i>dwarf-4</i> Mutant of Lettuce," <u>Can. J. Bot.</u> , 1994, 72:1541-1549
	AZZ	Wei et al., " <i>Arabidopsis</i> <i>COP8</i> , <i>COP10</i> , and <i>COP11</i> Genes are Involved in Repression of Photomorphogenic Development in Darkness," <u>Plant Cell</u> , 1994, 6:629-643
	AAAA	Wei and Deng, " <i>COP9</i> : A New Genetic Locus Involved in Light-Regulated Development and Gene Expression in <i>Arabidopsis</i> ," <u>Plant Cell</u> , 1992, 4:1507-1518
	ABBB	Yokata, "The Structure, Biosynthesis and Function of Brassinosteroids," <u>Trends Plant Sci.</u> , 1997, 2(4):137-143
	ACCC	GenBank Accession No. AF044216
	ADDD	GenBank Accession No. X87368
	AEEE	GenBank Accession No. U54770
	AFFF	GenBank Accession No. M13785
	AGGG	GenBank Accession No. D64003
	AHHH	GenBank Accession No. U32579
	AIHH	GenBank Accession No. U68234

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	AJJJ	GenBank Accession No. X70981
	AKKK	GenBank Accession No. P48421
	ALLL	GenBank Accession No. AL049659
	AMMM	GenBank Accession No. P48418
	ANNN	GenBank Accession No. X71658

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